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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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EXAMINER	
WONG, ALLEN C	
ART UNIT	**PAPER NUMBER**
2613	

DATE MAILED: 05/20/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)	
	09/744,662	PAZ ET AL.	
	Examiner	Art Unit	
	Allen Wong	2613	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *23 February 2005*.

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *36-71* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *36-71* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☒ All b)☐ Some * c)☐ None of:

1.☒ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) Paper No(s)/Mail Date *2/23/05, 4/26/05*.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____.
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other: _____.

DETAILED ACTION

Continued Examination Under 37 CFR 1.114

1. A request for continued examination under 37 CFR 1.114, including the fee set forth in 37 CFR 1.17(e), was filed in this application after final rejection. Since this application is eligible for continued examination under 37 CFR 1.114, and the fee set forth in 37 CFR 1.17(e) has been timely paid, the finality of the previous Office action has been withdrawn pursuant to 37 CFR 1.114. Applicant's submission filed on 2/23/05 has been entered.

Response to Arguments

2. Applicant's arguments with respect to claims 36 and 66 have been read and considered but are moot in view of the new ground(s) of rejection.

Claim Rejections - 35 USC § 103

1. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

2. Claims 36, 38-40, 47-54, 56-59, 63 and 66-67 are rejected under 35 U.S.C. 103(a) as being unpatentable over Azadegan (5,819,004) in view of Allen (5,892,535).

Regarding claim 36, Azadegan discloses a method of generating a compressed video stream (fig.20), comprising:

executing the program, the program providing a plurality of display commands which represent a user interface for the program (col.34, ln.19-22, and col.76, ln.16-22);

prior to compressing, generating a plurality of quantized transform coefficients from said display commands, wherein one or more different quantized transform coefficients are generated for different display commands (col.36, ln.34-41 and fig.20, element 456, note that prior to compressing, different one or plural quantization values are estimated or generated based on user input commands at element 454; also col.7, ln.2-4, plurality of quantized coefficients are generated); and

creating a compressed video stream from said plurality of display commands utilizing said coefficients (fig.20, element 462).

Azadegan does not specifically disclose the use of a server connected a client over a network that provides the client with remote access to a program running at the server, drawing at least a portion of the user interface for the program on a virtual display at the server, sending said compressed video stream to said client for remotely displaying the user interface at the client as a video stream as opposed to the plurality of display commands provided by the program, and receiving user input from the client that is directed to the user interface.

However, Allen teaches the use of a server connected a client over a network that provides the client with remote access to a program running at the server (see fig.2 and note the use of a media server that is connected over communication networks with remote access at an optional remote media server for running a program at the server), drawing at least a portion of the user interface for the program on a virtual display at the server (fig.2, element 204), sending said compressed video stream to said client for remotely displaying the user interface at the client as a video stream as opposed to the

plurality of display commands provided by the program (col.16, ln.16-60, note in fig.2, the use of remote display of the user interface in that the media server stores MPEG-2 data, VIDEO CYPHER-2 and other types of compressed media, and that the compressed media and programming information can be transmitted to the subscriber), and receiving user input from the client that is directed to the user interface (see fig.5 and note the subscriber or client requests for programs are sent to the head-end to be interfaced for processing such as verifying billing and transmit descrambling key to subscriber for requested programs to transmit). Therefore, it would have been obvious to one of ordinary skill in the art to combine the teachings of Azadegan with Allen, as a whole, for utilizing a configurable, cost effective, efficient, flexible, precise video distribution and transmission system (col.10, ln.18-25).

Regarding claim 38, Azadegan discloses wherein said generating comprises calculating coefficients (col.36, ln.34-41 and fig.20, element 456, note different plural quantization values are estimated or generated based on user input commands at element 454; also col.7, ln.2-4, plurality of quantized coefficients are generated).

Regarding claim 39, Azadegan discloses comprising determining a display requirement and wherein said quantization is responsive to said determination (col.36, ln.34-41 and fig.20, element 456, note different plural quantization values are estimated or generated based on user input commands at element 454; also col.7, ln.2-4, plurality of quantized coefficients are generated).

Regarding claim 40, Azadegan discloses wherein said coefficients are generated quantized (col.36, ln.34-41 and fig.20, element 456, note different plural quantization values are estimated or generated based on user input commands at element 454; also col.7, ln.2-4, plurality of quantized coefficients are generated).

Regarding claim 47, Azadegan discloses wherein said coefficients are quantized differently responsive to an identification of the command type (col.36, ln.34-41 and fig.20, element 456, note different plural quantization values are estimated or generated based on user input commands or command types at element 454; also col.7, ln.2-4, plurality of quantized coefficients are generated).

Regarding claim 48, Azadegan discloses wherein said coefficients are quantized differently responsive to a display content generated by said command (col.36, ln.34-41 and fig.20, element 456, note different plural quantization values are estimated or generated based on user input commands at element 454; also col.7, ln.2-4, plurality of quantized coefficients are generated).

Regarding claim 49, Azadegan discloses wherein said coefficients are quantized differently responsive to a spatial effect of said command (col.14, ln.22-24 and in fig.5, note coefficients are quantized differently by user-initiated spatial editing step 178).

Regarding claim 50, Azadegan discloses wherein said coefficients are quantized differently, responsive to a frequency to which said coefficient corresponds (col.7, ln.16-20, note coefficients are quantized differently due to a frequency or a limit on the output data bit rate, so quantized coefficients are dynamically adjusted).

Regarding claim 51, Azadegan discloses wherein said commands are provided and coefficients generated sequentially for individual commands (col.34, ln.47-61 and col.36, ln.34-41 and fig.20, element 456, note user can define a priority for each region within a frame is considered a single command, then when user is done with defining priorities for all the regions within the frame, a plurality of individual user commands is generated in a sequence defined by the user-initiated prioritized regions).

Regarding claim 52, Azadegan discloses wherein said commands are provided and coefficients generated on a block-by-block basis (col.51, ln.56-57).

Regarding claim 53, Azadegan discloses wherein said commands are provided and coefficients generated on a frame-by-frame basis (fig.38, note element 856 discloses quantized coefficients generated on a frame-by-frame basis where step 862 goes to step 866 for incrementing the frame index to the next frame until all frames are processed).

Regarding claim 54, Azadegan discloses comprising varying said generation between corresponding commands on consecutive frames (fig.38, note element 856 discloses quantized coefficients generated on a frame-by-frame basis where step 862 goes to step 866 for incrementing the frame index to the next frame until all frames are processed).

Regarding claim 56, Azadegan discloses comprising preprocessing at least one of said commands prior to said generation (col.5, ln.13-17).

Regarding claim 57, Azadegan suggests reducing the number of bits, thereby lowering the bit rate (col.25, ln.43-62).

Regarding claim 58, Azadegan discloses wherein said preprocessing interacts with said generation to counteract visibility reducing effects of said generation (fig.20, note element 454 where input user quality changes are done for counteracting visibility reducing effects).

Regarding claim 59, Azadegan discloses wherein said preprocessing interacts with said generation to increase a visibility of an effect of a command (fig.20, note element 454 where input user quality changes are done for increasing visibility).

Regarding claim 63, Azadegan discloses wherein creating said compressed video stream comprises creating a stream including both an effect of said commands and at least a portion of an additionally provided compressed video stream (fig.20, note element 462, the compressed video stream is created where the compressed video stream includes the effect of the commands from user input, from element 456, and the effect on the portion of an additional compressed video stream, from element 454).

Regarding claim 66, Azadegan discloses a method of generating a compressed video stream (fig.20), comprising:

providing a plurality of display commands which represents a display (col.34, ln.19-22, and col.76, ln.16-22);

setting at least one compression parameter to different values for different ones of said display commands (col.36, ln.34-41 and fig.20, element 456, note different plural quantization values are estimated or generated based on user input commands at element 454, where a quantization value is a compression parameter; also col.7, ln.2-4, plurality of quantized coefficients are generated); and

creating a compressed video stream from said commands utilizing said at least one compression parameter (fig.20, element 462).

Azadegan does not specifically disclose the use of a server connected a client over a network that provides the client with remote access to a program running at the server, drawing at least a portion of the user interface for the program on a virtual display at the server, sending said compressed video stream to the client for remotely

displaying the user interface at the client as a video stream as opposed to the plurality of display commands provided by the program, and receiving user input from said client that is directed to the user interface.

However, Allen teaches the use of a server connected a client over a network that provides the client with remote access to a program running at the server (see fig.2 and note the use of a media server that is connected over communication networks with remote access at an optional remote media server for running a program at the server), drawing at least a portion of the user interface for the program on a virtual display at the server (fig.2, element 204), sending said compressed video stream to the client for remotely displaying the user interface at the client as a video stream as opposed to the plurality of display commands provided by the program (col.16, ln.16-60, note in fig.2, the use of remote display of the user interface in that the media server stores MPEG-2 data, VIDEO CYPHER-2 and other types of compressed media, and that the compressed media and programming information can be transmitted to the subscriber), and receiving user input from said client that is directed to the user interface (see fig.5 and note the subscriber or client requests for programs are sent to the head-end to be interfaced for processing such as verifying billing and transmit descrambling key to subscriber for requested programs to transmit). Therefore, it would have been obvious to one of ordinary skill in the art to combine the teachings of Azadegan with Allen, as a whole, for utilizing a configurable, cost effective, efficient, flexible, precise video distribution and transmission system (col.10, ln.18-25).

Regarding claim 67, Azadegan discloses wherein said at least one compression parameter comprises a spatial quantization parameter (col.8, ln.40-45).

Claims 37 and 41-46 are rejected under 35 U.S.C. 103(a) as being unpatentable over Azadegan (5,819,004) and Allen (5,892,535) in view of Nickerson (5,926,569).

Regarding claim 37, Azadegan discloses the use of a ratio lookup table (col.44, ln.34-37). Azadegan and Allen do not specifically disclose wherein said generating comprises looking up coefficients in a table. However, Nickerson teaches the use of a quantized coefficient lookup table (fig.5, element 508). Therefore, it would have been obvious to one of ordinary skill in the art to incorporate Nickerson's teaching into the teachings of Azadegan and Allen for accurately encoding image data in an efficient manner by achieving a specified optimum target bit rate (Nickerson col.2, ln.32-34).

Regarding claim 41, Azadegan discloses generation of quantized coefficients (col.36, ln.34-41 and fig.20, element 456, note different plural quantization values are estimated or generated based on user input commands at element 454; also col.7, ln.2-4, plurality of quantized coefficients are generated). Azadegan and Allen do not specifically wherein said coefficients are generated unquantized and comprising quantizing said generated coefficients. However, Nickerson teaches the coefficients are generated unquantized and comprising quantizing the generated coefficients (fig.5, note element 504, coefficients are unquantized, and at element 502, there are current

quantized coefficients, then at element 508, quantized coefficients are produced). Therefore, it would have been obvious to one of ordinary skill in the art to incorporate Nickerson's teaching into the teachings of Azadegan and Allen for accurately encoding image data in an efficient manner by achieving a specified optimum target bit rate (Nickerson col.2, ln.32-34).

Regarding claim 42, Azadegan discloses wherein the coefficients are quantized separately for different commands (col.2, ln.28-30 and col.36, ln.34-41, note the user is requesting different quantization values, where each selection of one quantization value require one command).

Regarding claim 43, Azadegan discloses wherein the coefficients are quantized separately for different image blocks (col.37, ln.28-29).

Regarding claim 44, Azadegan discloses generation of quantized coefficients (col.36, ln.34-41 and fig.20, element 456, note different plural quantization values are estimated or generated based on user input commands at element 454; also col.7, ln.2-4, plurality of quantized coefficients are generated). Azadegan and Allen do not specifically disclose wherein said coefficients for an entire image are quantized together. However, Nickerson teaches the determination of an average quantization level is selected for the current frame, thereby the coefficients of an entire image are quantized together (col.6, ln.11-15). Therefore, it would have been obvious to one of

ordinary skill in the art to incorporate Nickerson's teaching into the teachings of Azadegan and Allen for accurately encoding image data in an efficient manner by achieving a specified optimum target bit rate (Nickerson col.2, ln.32-34).

Regarding claim 45, Azadegan discloses wherein the quantization is responsive to a desired bandwidth of the stream (col.25, ln.43-62).

Regarding claim 46, Azadegan discloses wherein the quantization is responsive to a desired quality of the stream (col.2, ln.24-27 and col.14, ln.9-12).

1. Claims 55 and 68 is rejected under 35 U.S.C. 103(a) as being unpatentable over Azadegan (5,819,004) and Allen (5,892,535) in view of Nolan (6,049,316).

Regarding claim 55, Azadegan discloses comprising varying said generation between corresponding commands on consecutive frames (fig.38, note element 856 discloses quantized coefficients generated on a frame-by-frame basis where step 862 goes to step 866 for incrementing the frame index to the next frame until all frames are processed). Azadegan and Allen do not specifically disclose said varying comprises generating a different effective refresh rate for different commands. However, Nolan teaches the use of a refresh rate as a compression parameter (col.8, ln.28-34). Therefore, it would have been obvious to one of ordinary skill in the art to incorporate Nolan's teaching of the refresh rate into the teachings of Azadegan and Allen for

optimizing the display monitors so as to view images at a high quality level regardless of resolution (col.13, ln.34-36).

Regarding claim 68, Azadegan discloses wherein said at least one compression parameter comprises a spatial quantization parameter (col.8, ln.40-45). Azadegan and Allen do not specifically disclose wherein said at least one compression parameter comprises a refresh rate. However, Nolan teaches the use of a refresh rate as a compression parameter (col.8, ln.28-34). Therefore, it would have been obvious to one of ordinary skill in the art to incorporate Nolan's teaching of the refresh rate into the teachings of Azadegan and Allen for optimizing the display monitors so as to view images at a high quality level regardless of resolution (col.13, ln.34-36).

Claim 64 is rejected under 35 U.S.C. 103(a) as being unpatentable over Azadegan (5,819,004) and Allen (5,892,535) in view of Sindhu (6,175,650).

Regarding claim 64, Azadegan and Allen are silent about wherein a text display command is quantized using a finer quantization than a graphics command. However, Sindhu teaches wherein a text display command is quantized using a finer quantization than a graphics command (col.16, ln.37-44 and col.15, ln.29-32). Therefore, it would have been obvious to one of ordinary skill in the art to incorporate Sindhu's teachings into the teachings of Azadegan and Allen for achieving high perpetual quality for the entire image (col.4, ln-7-8).

Claim 69 is rejected under 35 U.S.C. 103(a) as being unpatentable over Azadegan (5,819,004) and Allen (5,892,535) in view of Oyamada (5,617,333).

Regarding claim 69, Azadegan discloses wherein said at least one compression parameter comprises a spatial quantization parameter (col.8, ln.40-45). Azadegan and Allen do not specifically disclose wherein said at least one compression parameter comprises a spectral quantization parameter. However, Oyamada teaches the use of a spectral quantization parameter as a compression parameter (col.2, ln.1-5). Therefore, it would have been obvious to one of ordinary skill in the art to incorporate Oyamada's teaching of the spectral quantization parameter into the teachings of Azadegan and Allen for proper, efficient encoding of images while robustly preserving the integrity of the image data.

Claim 70 is rejected under 35 U.S.C. 103(a) as being unpatentable over Azadegan (5,819,004) and Allen (5,892,535) in view of Tsang (5,619,591).

Regarding claim 70, Azadegan discloses wherein said at least one compression parameter comprises a spatial quantization parameter (col.8, ln.40-45). Azadegan and Allen do not specifically disclose wherein said at least one compression parameter comprises an intensity quantization parameter. However, Tsang teaches the use of an intensity quantization parameter as a compression parameter (col.4, ln.44-46).

Therefore, it would have been obvious to one of ordinary skill in the art to incorporate Tsang's teaching of intensity quantization parameter into the teachings of Azadegan and Allen for accurately encoding high quality image data in an efficient manner by utilizing the least amount of data bits (col.1, ln.65 to col.2, ln.3).

Claims 60-62, 65 and 71 are rejected under 35 U.S.C. 103(a) as being unpatentable over Azadegan (5,819,004) and Allen (5,892,535) in view of Kenner (6,003,030).

Regarding claim 60, Azadegan discloses providing a plurality of sets of display commands (col.34, ln.19-22, and col.76, ln.16-22). Azadegan and Allen do not specifically disclose wherein providing said display commands comprises providing a plurality of sets of display commands, each corresponding to a different compressed stream. However, Kenner teaches the transmitting or broadcasting of the generated video stream data to a plurality of users via servers, ISPs (Internet Service Providers), MSPs (Mirror Service Providers) and delivery sites (col.7, ln.49-55 and fig.1 to plurality of users). Therefore, it would have been obvious to one of ordinary skill in the art to implement Kenner's teaching into the teachings of Azadegan and Allen for optimized distribution of information and video data to a plurality of users in an efficient, cost-effective manner (col.5, ln.12-14).

Regarding claim 61, Azadegan discloses wherein a same display command is compressed differently for the different sets (col.34, ln.19-22, and col.76, ln.16-22; different streams will have a different set of display commands).

Regarding claim 62, Azadegan discloses a display (fig.1, element 31), wherein providing a plurality of display commands which represents a display (col.34, ln.19-22, and col.76, ln.16-22). Azadegan and Allen do not specifically disclose wherein said plurality of display commands corresponds to an Internet browser user interface. However, Kenner teaches the use of an Internet browser user interface (col.1, ln.14, ln.24-27). Therefore, it would have been obvious to one of ordinary skill in the art to incorporate Kenner's teaching into the teachings of Azadegan and Allen for conveniently viewing video image data such as video on demand and other Internet transmitted data.

Regarding claim 65, Azadegan discloses the transmission of final encoded video image data to a set-top box on the receiver end of a user via television transmitter (col.11, ln.54-63). Azadegan and Allen do not specifically disclose comprising broadcasting said generated video stream to a plurality of users, using a compressed video transport stream. However, Kenner teaches the transmitting or broadcasting of the generated video stream data to a plurality of users via servers, ISPs (Internet Service Providers), MSPs (Mirror Service Providers) and delivery sites (col.7, ln.49-55 and fig.1 to plurality of users). Therefore, it would have been obvious to one of ordinary

skill in the art to implement Kenner's teaching into the teachings of Azadegan and Allen for optimized distribution of information and video data to a plurality of users in an efficient, cost-effective manner (col.5, ln.12-14).

Regarding claim 71, Azadegan discloses the transmission of final encoded video image data to a set-top box on the receiver end of a user via television transmitter (col.11, ln.54-63). Azadegan and Allen do not specifically disclose comprising broadcasting said generated video stream to a plurality of users, using a compressed video transport stream. However, Kenner teaches the transmitting or broadcasting of the generated video stream data to a plurality of users via servers, ISPs (Internet Service Providers), MSPs (Mirror Service Providers) and delivery sites (col.7, ln.49-55 and fig.1 to plurality of users). Therefore, it would have been obvious to one of ordinary skill in the art to implement Kenner's teaching into the teachings of Azadegan and Allen for optimized distribution of information and video data to a plurality of users in an efficient, cost-effective manner (col.5, ln.12-14).

Contact Information

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Allen Wong whose telephone number is (571) 272-7341. The examiner can normally be reached on Mondays to Thursdays from 8am-6pm Flextime.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Christopher Kelley can be reached on (571) 272-7331. The fax phone

number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Allen Wong
Primary Examiner
Art Unit 2613

AW
5/16/05